PENDING CLAIMS

1-36 (Canceled)

37-72 (Withdrawn)

73. (Amended) A method for preserving nucleated cells having lipid membranes, comprising:

a. Reversibly porating the lipid membranes of the nucleated cells;

b. Loading the porated nucleated cells with ~~an~~ a bio-preserving agent having bio-preservation properties to a predetermined intracellular concentration ~~sufficient for preserving the~~ to preserve a cellular material, the predetermined intracellular concentration of the bio-preserving agent being less than or equal to about 1.0 M;

c. Preparing the bio-preservation agent loaded nucleated cells for storage by a method selected from the group consisting of ~~cyropreserving,~~ cryopreserving, freeze drying, and drying without the use of a freezing step; and

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d. Storing the prepared nucleated cells so that they can be recovered to a viable state in which the mammalian nucleated cells survive and grow.

74. (Amended) The method of claim 73, wherein the ~~cellular material comprises~~ nucleated cells are mammalian cells.

75. (Amended) The method of claim 74, wherein the ~~cellular material is~~ nucleated cells are selected from the group consisting of hepatocytes, fibroblasts, chondrocytes, keratinocytes, islets of Langerhans and hematopoeitic cells.

76. (Previously added) The method of claim 73, wherein the lipid membranes are porated using a membrane toxin.

77. (Previously added) The method of claim 76, wherein the lipid membranes are reversibly porated using a *Staphylococcus aureus* α-toxin.

78. (Previously added) The method of claim 77, wherein the lipid membranes are reversibly porated using H5 α-toxin.

79. (Previously added) The method of claim 78, wherein the step of reversibly porating the lipid membranes comprises forming pores of at least about 2.0 nanometers in the lipid membranes.

80. (Previously added) The method of claim 73, wherein the bio-preservation agent comprises a non-permeating sugar having bio-preservation properties.

81. (Previously added) The method of claim 80, wherein the sugar having bio-preservation properties is selected from a group consisting of trehalose, sucrose, glucose, and maltose.

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82. (Amended) The method of claim ~~81,~~ 80, wherein the bio-preservation agent consists essentially of the sugar selected from the group consisting of trehalose, sucrose, glucose, and maltose.

83. (Amended) The method of claim 73, wherein the ~~mammalian~~ nucleated cells are loaded with an intracellular concentration of a bio-preservation agent less than or equal to about 0.4M.

84. (Amended) The method of claim 73, wherein the bio-preservation agent loaded ~~mammalian~~ nucleated cells are prepared for storage by freezing to cryogenic temperatures ~~sufficient~~ to permit cryogenic storage of the ~~mammalian~~ nucleated cells.

85. (Amended) The method of claim 73, wherein the bio-preservation agent loaded ~~mammalian~~ nucleated cells are prepared for storage by freeze drying to ~~a level sufficient to~~ permit dry storage of the ~~mammalian~~ nucleated cells.

86. (Amended) The method of claim 85, wherein the bio-preservation agent loaded ~~mammalian~~ nucleated cells are plunge frozen to a cryogenic temperature.

87. (Amended) The method of claim 73, wherein the bio-preservation agent loaded ~~mammalian~~ nucleated cells are prepared for storage by vacuum or air drying ~~to a level sufficient~~ to permit dry storage of the ~~mammalian~~ nucleated cells.

88. (Amended) The method of claim ~~81,~~ 80, wherein the bio-preservation agent further comprises a penetrating cryoprotective agent.

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89. (Previously added) The method of claim 88, wherein the bio-preservation agent comprises a penetrating cryoprotective agent selected from the group consisting of DMSO, glycerol and ethylene glycol.

90-102. (Withdrawn)